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ABSTRACT

Likert-type inventories of children's attitude toward the world of work were administered to approximately 1,500 students in grades 2-8. The positively and negatively stated scores were analyzed separately. Agreement with positively stated items showed almost no difference among the various grades. However, the trend toward more disagreement among older students with negatively stated items resulted in significant differences among the grades. It is conjectured that the observed differences result from the decreasing tendency of older children to acquiesce. Implications for attitude assessment are discussed. (Author)

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Age Differences in Degree of Acquiescence on Positively and Negatively Scored Attitude Scale Items

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The major objective of this paper is to present findings about the differential effects of positively- and negatively-scored items. While no conclusions are reached as to the source of acquiescence or the proper steps to control for this phenomenon, the authors hope to provide a basis for increased understanding of its importance as a source of invalidity in evaluation.

The data reported here were gathered in the evaluation of a program already in progress, and therefore suffer from a major limitation: Different intact grades provided the data base. Thus the data come from groups which may differ for extraneous reasons, a case common to all cross-sectional research. Maturation rather than effects of the program may have produced the results reported herein. No pertinent longitudinal data on a single group of students are presently available to the authors.

A great amount of research and writing has been devoted to the effects of the acquiescence response set on attitude scales.[1,2,3,4] The major suggestion for controlling for the set appears to be the inclusion of a number of negatively stated items in an inventory, with the convention favoring one-half items positive and one-half negative. Some writers,[5] noting that negative items are usually more reliable than positive items, have suggested that more items keyed in the negative direction be employed. One example of the use of all negative items was included in a study in primary economics,[5] with the conclusion that half negative items was preferred. That study, however, was concerned with measurement in the cognitive domain rather than assessing attitudes.

The presence of acquiescence is well recognized in the cognitive domain though most of the research was initially done in the affective domain. There

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is no absolute way of determining the effect of acquiescence on tests or inventories. Brandenburg and Whitney[6] report that they found no more acquiescence in true-false tests than in multiple-choice examinations.

It is difficult to define acquiescence in multiple-choice tests, but when acquiescence is defined as a tendency to respond on the agree side of neutral, there is little doubt of its existence. For example, on a 7-point Likert scale with strongly agree assigned the value one, and neutral assigned the value four, the mean response is usually less than four. This occurs when both positive and negative statements cover the same aspects of the concept and negative items have reversed scoring. Thus, respondents tend to agree with positive statements to a greater degree than they disagree with negative statements. Also, on true-false or yes-no items, one can expect the percentage correct of true items to exceed that for false items.[5,6,7] However, the extent to which acquiescence is a factor of item clarity or response set has not been determined. Subjective evaluation of items in inventories usually conclude that the keyed "yes" or positive statements are more clearly stated and suggest that acquiescence may be partly due to the inability of item writers to construct clearly worded negative statements.

Kerlinger's scales[8] presented only positively-stated items with no attempt to control acquiescence. As his scales were concerned with the nature of the correlation between progressive and traditional educational philosophies rather than scores of individual examinees, acquiescence may not have been a relevant factor in his research. One should not, however, use one of his scales to place an individual's attitude on a continuum without realizing that individuals may differ significantly in degree of acquiescence to these statements.

There is a difference in the degree and nature of the "negative" label which applies to certain statements. Some negative statements are simple reversals of positive statements, while other "negative" statements are so labeled because they are positive statements for a person with the opposite viewpoint. Thus the terms "negative statement" or "negatively-stated item" are incorrect, and better wording might be positively and negatively criterial,[2] favorable and unfavorable,[9] pairs of opposite statements,[10] or reversals in direction.[3] The statements in the present study were paired; that is, two statements covered each of various attitudes toward the world of work. Each pair contained one reversed item, but these reversed items did not have negative wording. Thus, the proper reference is made to the way the items are scored and not to the way the statements are worded.

Instrument

Likert-type inventories of children's attitudes toward the world of work were administered to approximately 1500 students in grades two through eight. The items for the students in grades two through six were on a 3-point (agree, don't know, disagree) and in grades seven and eight on a 5-point scale (strongly agree and strongly disagree added). The 30 items for grades two through six were 15 paired statements; that is, two items on the same concept with one opposed or unfavorable to the concept as "keyed" in the curriculum. Half of the items were thus scored as reversals, or are "negatively scored." Grades seven and eight were administered 20 items via a 5-point Likert scale, 10 of which were "negatively scored."

Examples of Items

Positively scored.
(1) A person must learn how to work to get the good jobs.
(2) People should look for jobs that make them happy.

Negatively scored.
(1) Learning how to work is a waste of time.
(2) The only reason to work is to make money.

Subjects

The subjects in the study were participants in the Santa Cruz Career Education Project, Santa Cruz County, Arizona. All participating students from grades two through eight were included. Testing was done on the same day in all sites by examiners who had no instructional duties with the children.

Analysis

The analysis of the data consisted of calculating the means on positive and negative items for each of the grade levels. The means of the negative and total scores were found to be significantly different among the grades two through six and between grades seven and eight.

Table 1

Mean Attitude Scores on Positive, Negative,[1] and Total Items

Grade	N	Positive	Negative	Total
2	201	19.9	30.6	50.5
3	268	19.8	29.6	49.4
4	315	19.5	28.0	47.5
5	276	19.9	25.1	45.0
6	303	20.5	23.4	43.9
7	108	21.8	27.0	48.8
8	77	21.4	23.7	45.1

[1]The negative items have reversed scoring, so lower scores on all scales reflect a more positive attitude toward the world of work.

Results

The data are presented in Table 1. The means for the positively-scored items remain relatively constant over the grades, indicating no difference in attitude among the students in grades 2 through 6. However, a consistent decline in means on negatively-scored items indicates a tendency toward a more favorable attitude on the part of the students in the higher grades. The differences among negatively-scored items (and thus total scores) are significant beyond the .05 level. Thus from the total scores it can be argued that students in the higher grades have significantly better attitudes toward career development, but if only positive items are used no differences are found.

Similar data were found in comparing the seventh and eighth grades although those scores cannot be compared with the lower grades.

Discussion

It does not seem tenable to attribute the observed differences in difficulty to positive and negative items. That argument is based on the grammatical differences in positively and negatively stated items. The present study employed only items stated in a positive context. Because no negatives were used in the statements, the observed differences should not be considered to result from an inherent ambituity in negative statements.

A possible explanation is that older children tend to acquiesce less than younger children, indicating a negative relationship between acquiescence and age. Thus, as subjects get older and more sophisticated, they are better able to control the tendency to respond favorably to attitude items. Some differences in this study are attributed to the decreasing tendency of children in higher grades to acquiesce.

Summary

The present paper presents evidence that differences on positively- and negatively-scored items are similar to previous findings with positively- and negatively-stated items. These differences refute the contention that acquiescence results from inherent ambiguity in negative items.

A secondary purpose of the paper is to caution users of attitude scales in program evaluation against making invalid conclusions of program effectiveness which may be due to a decreasing tendency to acquiesce among older students.

Now a problem to challenge the reader. If acquiescence enticed the children in the lower grades to agree with negatively-stated items, shouldn't one expect the same influence to enable these same children to show more agreement with the positively-stated items? Yet the scores of the children in the lower grades are no more positive toward the world of work than are the scores of children in the upper grades. Perhaps some of the difference observed in Table 1 results from acquiescence and another portion results from true differences in attitudes. Could it be that the older children actually had more positive attitudes toward the world of work? Or is it likely that acquiescence occurs only on negatively scored items, and all ages react the same to positive statements.

Whatever the truth, it is evident that positive and negative items produced contradictory results in the evaluation of the program from which these data were obtained.

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